Electrical Safety at Work: Fixed Wiring, Portable Appliances and Your Duties

Compliance · Published 31 August 2026 by Integral Safety Ltd · integralsafetyltd.co.uk/blog/electrical-safety-at-work-fixed-wiring-and-portable-appliances



The Quiet Hazard in Every Workplace

Every workplace runs on electricity, and because it is invisible and silent, familiarity breeds complacency. Electric shock, burns and electrical fires remain a persistent cause of serious harm at work, and the damage is not limited to the person who gets the shock. A failed distribution board or an overheating cable can take out a whole production line, a care setting, or a school for days.

The encouraging news is that many electrical incidents trace back to a small number of preventable causes: damaged equipment that stayed in use, amateur repairs, overloaded circuits, and installations that nobody has looked at properly in years. None of this requires expensive technology to fix. It requires a system that is actually followed, and people who understand why it matters.

This guide sets out what the law expects, what a compliant arrangement looks like for both fixed wiring and portable equipment, who carries the responsibility, and what records you need to show if something goes wrong.

What the Law Actually Requires

The Electricity at Work Regulations 1989 require electrical systems to be constructed, maintained and used so as to prevent danger, in most cases so far as is reasonably practicable. The regulations

do not prescribe test frequencies, certificates or a fixed list of equipment to check. Instead they expect a risk-based approach: you decide how often things need attention based on the environment, the equipment and how it is used, and you must be able to show your decisions are reasonable.

The Management of Health and Safety at Work Regulations 1999 add the general duty to assess risks and put sensible controls in place, so electrical hazards belong in your risk assessment alongside everything else. The Provision and Use of Work Equipment Regulations 1998 (PUWER) also apply to electrically powered work equipment, requiring it to be maintained in an efficient state and in efficient working order.

The duty holder is normally the employer, but in shared or multi-let buildings this can get murky quickly. Landlords typically retain responsibility for the fixed installation serving common areas and the building shell, while tenants are responsible for their own fit-out, extension leads and portable equipment. If your lease is unclear, clarify it in writing before an EICR throws up a defect nobody wants to pay for.

The Fixed Installation: EICRs

The wiring behind the walls, distribution boards, sockets and lighting circuits should be inspected and tested periodically by a competent electrician against the current edition of BS 7671, the IET Wiring Regulations, producing an Electrical Installation Condition Report (EICR). For most commercial premises five years is a sensible starting point, but it is not a fixed legal maximum. Industrial sites, commercial kitchens and damp, dusty or heavily used environments often warrant a shorter cycle.

The report records observations using classification codes. C1 means danger present and requires immediate action; C2 means potentially dangerous and requires urgent remedial work; C3 is an improvement recommendation; and FI means further investigation is needed. It is the follow-up remedial work, properly certified and closed out, that keeps people safe, not a report sitting in a drawer.

A common failing is commissioning the EICR, receiving a report full of C2s, and then doing nothing because nobody owns the action. Treat the EICR like a fire risk assessment: a live document with an action plan, named owners and target dates. Keep the EICR, the electrician's certificates for remedial work and any minor works certificates together as your evidence trail.

Portable Appliances: Testing With Common Sense

Portable appliance testing, widely known as PAT, is often misunderstood. No law says every item must be tested annually, or tested at all as a matter of routine. The legal duty under the Electricity at Work Regulations and PUWER is to maintain equipment so that it remains safe; combined inspection and testing by a competent person, such as a qualified electrician or a specialist PAT testing provider, is one recognised way of doing that, at intervals you choose based on risk.

A proportionate programme usually looks like this:

- **User checks before use:** a quick look at the lead, plug and casing for obvious damage. This is the cheapest and most frequent safeguard you have.
- **Formal visual inspections:** periodic checks by a trained person, including opening the plug where appropriate, without necessarily using test equipment every time.
- **Combined inspection and testing:** at intervals matched to the equipment class and the environment, following guidance such as the IET Code of Practice for In-Service Inspection and Testing of Electrical Equipment. A kettle in a busy site cabin on a construction project needs far more frequent attention than a desktop monitor in a quiet office.

Keep a simple asset register recording each item, its last inspection or test date, the result, and who carried it out. It focuses the programme, stops duplicate effort, and gives you solid evidence of maintenance if an insurer or client ever asks.

Everyday Habits That Prevent Incidents

Formal testing only works if everyday behaviour supports it. Many serious electrical incidents involve equipment or wiring that was already visibly faulty, so the warning signs were there and were missed or ignored.

- Take damaged equipment out of use immediately and label it clearly so nobody plugs it back in while it waits for repair
- Avoid daisy-chained extension leads and overloaded sockets; where demand is permanent, get more sockets fitted properly
- Fully unwind cable reels under load to prevent the coiled cable from overheating
- Use RCD protection for outdoor and portable equipment, and consider reduced low voltage 110v tools on construction and refurbishment sites
- Only allow competent, qualified people to repair or modify electrical equipment; taped-up leads and homemade rewired plugs cause real and entirely avoidable harm
- Build electrical safety into staff inductions so new starters know what a fault looks like and exactly how to report it

Who Is Responsible and What Records to Keep

Day to day responsibility usually sits with whoever manages the building or site, often a facilities or operations manager, with the employer carrying overall legal accountability. That person should own the EICR action plan, the appliance register and the process for taking faulty equipment out of service. In busy settings such as warehousing and logistics, where forklifts charge overnight and extension leads multiply at seasonal peaks, name this responsibility in a job description rather than leaving it to whoever notices first.

Records worth keeping include the current EICR plus at least the previous one for comparison, certificates for remedial work, the appliance inspection and test register, RCD test records, and training or induction records showing staff know how to spot and report faults. Keep them together, ideally digitally, so they survive staff turnover and can be produced quickly.

Review is not a one-off decision. Revisit your EICR interval and appliance testing regime whenever the use of the building changes significantly, after any electrical incident or near miss, and once the current EICR has been acted on in full. A periodic health and safety audit is a good moment to check the paperwork matches reality on the ground.

What a Proportionate Electrical Safety Regime Looks Like

A proportionate electrical safety regime is not expensive. It is an EICR on a sensible, risk-based cycle with remedial work closed out, a risk-based appliance inspection and testing programme, and a workforce that reports damage rather than working around it. Problems arise when one of these is missing and nobody notices until something overheats.

If you are unsure whether your arrangements would stand up to scrutiny, Integral Safety, based in Coalville and covering the East Midlands, can review your management arrangements and records as part of a wider health and safety audit or through ongoing competent person support. We work with manufacturing and engineering and care home clients, among others. The testing itself needs a qualified electrician. Get in touch and we will point you in the right direction.

Talk to Integral Safety Ltd

We are health and safety consultants based in Coalville, Leicestershire, working with businesses across the East Midlands. If anything in this guide applies to your workplace, we can help.

Phone	01530 382 150 or 01664 400 450
Email	info@integralsafetyltd.co.uk
Website	integralsafetyltd.co.uk

This guide is general information about UK health and safety law and practice, correct as at 11 November 2026. It is not advice on your particular circumstances. The latest version is at https://integralsafetyltd.co.uk/blog/electrical-safety-at-work-fixed-wiring-and-portable-appliances.